To: McWhirter, Lisa[McWhirter.Lisa@epa.gov]

From: Albright, David

Sent: Fri 5/13/2016 1:27:20 PM

Subject: Re: research aquifer exemptions california

After looking at his message again, I would suggest you tell him that we are in the midst of a relatively short term firestorm of data collection, analysis, and decision-making over the next 9-12 months, so the timing may not be great for collaboration on long-term research. But I would also point out that we will be gathering a lot of data that may eventually be useful to the kind of research he is interested in.

Sent from my iPhone

On May 13, 2016, at 6:14 AM, McWhirter, Lisa < McWhirter. Lisa@epa.gov > wrote:

Do you have a response I can send him...that we will look into this and contact him later? Or something along those lines?

From: Albright, David

Sent: Friday, May 13, 2016 9:14 AM

To: McWhirter, Lisa < McWhirter.Lisa@epa.gov > Cc: Dermer, Michele < Dermer.Michele@epa.gov > Subject: Re: research aquifer exemptions california

Hi Lisa, let's hold off for the moment on scheduling anything. I'm going to have Michele look into this a bit further before we pull any triggers. I also want to check in with John K since Steve is operating out of the SCFO. Thanks, David

Sent from my iPhone

On May 13, 2016, at 5:41 AM, McWhirter, Lisa < McWhirter, Lisa@epa.gov > wrote:

That sounds great! I wasn't sure exactly how you felt about him working on CA AEs. If you are okay with it, then let's set up a call with him to discuss. My only concern that if his model provided different results than our analysis, then how would we proceed.

Thanks, Lisa From: Albright, David

Sent: Thursday, May 12, 2016 7:13 PM

To: Dermer, Michele < Dermer.Michele@epa.gov > Cc: McWhirter, Lisa < McWhirter.Lisa@epa.gov > Subject: FW: research aquifer exemptions california

This guy wants to do long-term scientific research, which could be quite valuable (in the long-term). I want to put him to work assisting with our review of any highly technical current source analyses that land on our desk. Do you see a happy medium that we might want to discuss?

From: McWhirter, Lisa

Sent: Thursday, May 12, 2016 8:57 AM

To: Albright, David < <u>Albright.David@epa.gov</u>> **Subject:** FW: research aquifer exemptions california

FYI. I received the email below from Steve Kraemer. Do you have a few minutes today or tomorrow to discuss how I should respond. I was thinking I could offer to hold a call with you and Steve and discuss options... this project could be valuable, but CA is sensitive, esp. the AG AE application. We could offer him to work with Region 7 or 8 or find other data for him to use. I am guessing he wants to test his model.

Let me know what you think,

Thanks,

Lisa

From: Kraemer, Stephen

Sent: Thursday, May 12, 2016 11:33 AM

To: McWhirter, Lisa < McWhirter, Lisa@epa.gov>

Cc: Kemmerer, John < KEMMERER. JOHN@EPA.GOV> Subject: research aquifer exemptions california Hi Lisa, Bruce Kobelski told me you spent some time investigating the aquifer exemption situation out in California. Last month I started a 2 year change in duty station at the R9 SCFO in Los Angeles. I am still part of ORD NERL. One of my proposed safe and sustainable water resources research projects is to support UIC and AEs, under leadership of Susan Mravik and Rick Wilkin, NRMRL-Ada (SSWR 3.03.B). I would like to expand the utility of my WhAEM capture zone delineation tool to include mapping of area of potential influence of injection under transient, multilayer, variable density aquifer conditions. The philosophy is to make models as simple as possible, but not simpler. Marilyn Ginsberg provided early inspiration to the idea and I saw recent evidence of a draft OW spreadsheet model. In conversation with David Albright and Matt Small, I am hesitant to assume I could get my hands on real California Kern County and oil and gas data right away, but I am always looking for an opening. For example, see recent news about Arroyo Grande attached. I am thinking of working with the sea water barrier injection wells data in Los Angeles or Orange County as an analog (injection of fresh water nearby dense fluid as opposed to injection of denser fluid nearby fresher water). I am working with John Kemmerer on advice and contacts. Based on your experience out here, I would greatly value your comments on my background document and pre-proposal (attached). Anything you are willing to share. Cheers, Steve Kraemer Stephen R. Kraemer, Ph.D, Research Hydrologist

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